

RESPONSE TRAVERSING REJECTION

In the Office Action of September 7, 2007, the Examiner rejected all of the claims under 35 U.S.C. 103(a) as being unpatentable over Parry 3,808,080 in view of Fujii 5,313,901.

The Examiner states that Parry discloses an ultrasonic seaming apparatus which has all of the features of the pending claim 1 of the present application except for the provision of a pin portion. The Examiner submits that the pin is shown in Fujii and that it would be obvious to combine the references.

The applicant respectfully disagrees with both premises. As noted by the Examiner, Parry discloses an ultrasonic seaming apparatus whose operation is described in column 3 line 62 to column 4 line 31. As is clear from the description and the associated drawings in Parry, the drive means (presser foot 35 and feed dog 36) operates to drive sheet material through the machine in a conventional "sewing machine" fashion. The disc 30, which acts as the anvil for ultrasonic welding, is mounted to the same feed bar 48 as the feed dog 36, and therefore the disc 30 and feed dog 36 must move in unison (figure 4 of Parry). As is made clear in the passage from column 4 line 2 to line 21 of Parry, as the drive means (feed dog 36 and presser foot 35) operates, the disc 30 is **simultaneously** raised to act as the anvil between the work piece and the horn 18, to allow welding to occur. Therefore, in the apparatus of Parry, the drive means is engaged with the sheet material at the same time as the bonding means components (disc 30 and horn 18) are brought together to nip the sheet material, to allow bonding to occur i.e. in Parry, the driving means and nip portion of the bonding means operate together, at the same time, on the sheet material being bonded.

This is not the situation described in claim 1 of the present application. Claim 1 requires that the drive means and the nip portion co-operates "so as to **sequentially** nip then drive material through the apparatus with **only one** of said nip portion and said drive means in contact with sheet material in use of the apparatus **at any given moment**". Parry therefore teaches directly away from the arrangement described and claimed in the present application. Parry teaches simultaneous, not sequential, operation of the nip portion and the drive means.

Even if Parry were considered to teach the seaming apparatus of claim 1, absent the pin portion, the Fujii document does not disclose elements which operate as a pin portion as defined in the pending claim 1. In Fujii, a sewing apparatus with a particular form of drive means is disclosed. The drive means includes a presser foot 2, which operates in co-operation with a feed dog 5b to drive sheet material through the apparatus. Additionally, an upper feed dog 4 and lower feed dog 5a are also provided, with the upper feed dog 4 being “spring loaded” to adjust to varying thickness of fabric (column 2 lines 37 to 42 of Fujii). The Examiner considers that the upper feed dog 4 and lower feed dog 5a correspond to the pin portion of claim 1 of the present application. However, claim 1 of the present application requires a pin portion that is formed and arranged to hold the sheet material “at a time when it is **not engaged** by either the drive means or the bonding means”.

This is not the case with the feed dogs 4 and 5a of Fujii. Firstly, the feed dogs 4 and 5a of Fujii are part of the drive means, operating to drive sheet material through the apparatus and are not a distinct pin portion as described and claimed in the present application. Secondly, as clearly shown in the figures of Fujii, the feed dogs 4 and 5a hold (and drive) the sheet material simultaneously with the rest of the drive means provided (presser foot 2 and feed dog 5b). See figure 1 and figure 3 of Fujii which show the situation “in which feed force is transmitted to material fabrics inserted in a sewing machine incorporating the feed device embodied by the invention” (column 3, lines 51 to 53). Conversely, when the presser foot 2 and feed dog 5b are disengaged from holding the material as shown in figures 2 and 4 of Fujii, the feed dogs 4 and 5a are also disengaged, “no feed force is transmitted to material fabrics inserted in the sewing machine” column 2 lines 55 to 57. The detailed operation of the various feed dogs of Fujii is described on columns 7 line 44 to column 8 line 56. It is clear that the feed dogs 4 and 5a of Fujii are part of the drive means and operate, to hold the sheet material, only when the rest of the drive means is also holding (and driving) the sheet material. Therefore, the feed dogs 4 and 5a of Fujii do not conform to the requirement of claim 1 of the present application that the pin portion holds the sheet material at a time when it is not engaged by either the drive means or the bonding means. Furthermore, it is also noted that the feed dogs, as shown in the drawings of Fujii,

include serrated flat faces as typically found in sewing apparatus feed dogs. Such serrated flat faces, engaging the sheet material from above and below are designed to firmly grip the sheet material when driving it. Such a design, if used as the end (point) of a pin portion would prevent sheet material being readily pivoted about. For the above reasons, it is submitted that the feed dogs 4 and 5a of Fujii do not correspond to the pin portion of the present application.

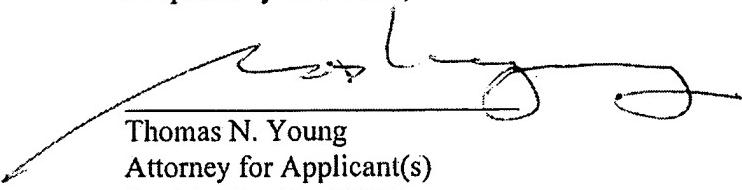
In addition to the foregoing, it is noted that if the apparatus of Perry were to be combined with the feed dog arrangements of Fujii, the apparatus of claim 1 of the present invention would not be arrived at. Fujii does not teach, in any way, a pin portion which engages the sheet material when the drive means and bonding means are not engaging the sheets. Combining Parry and Fujii would result in an apparatus which would have the same form as that shown in Parry but with the addition of two further feed dogs which would act **simultaneously** with the presser and foot drive means shown in Parry to drive the material past the disc 30 and horn 18 as shown in Parry. Therefore, a combination of Parry and Fujii does not teach the advantageous use of a pin portion. The pin portion of the present invention provides the ability to move sheet material during a seaming operation easily and without a tendency for the sheets being joined to separate or become wrinkled. It also facilitates very tight turns and seams to be made.

Claim 1 of the application is therefore new and not obvious in the light of the cited prior art. Claims 2 to 11 are dependent from claim 1, and therefore these claims are new and inventive to at least the same extent. Claim 12 is a method for joining sheet material using the apparatus according to claim 1 and is therefore also new and not obvious in the light of the cited prior art. In summary, it is believed it is submitted that claims 1 through 12 are clear of the prior art and any reasonable combination thereof made under 35 U.S.C. § 103(a). The arguments made herein are consistent with the law regarding combinations of references as set forth in *KSR International Co. vs. Teleflex Inc.*, 550 US (2007), especially as that opinion discusses the use of references which not only fail to conform with the invention as claimed, but actually leads away from the invention as claimed. Accordingly, I noticed that claims 1 through 12 are allowed if respectfully solicited.

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